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EXAMINER	
SMITH, JEREMIAH R	

ART UNIT	PAPER NUMBER
1791	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/592,952	MONSHEIMER ET AL.	
	Examiner	Art Unit	
	JEREMIAH SMITH	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/17/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This second Office action on the merits is in response to communication including remarks and amendments filed on 8/14/09.

Response to Amendment

2. Applicant's amendments filed 8/14/09 have been entered. The objection and 112 rejection to claims 27 and 28 have been withdrawn. A new abstract has been submitted and objection to the abstract has been withdrawn.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 27-30 and 36-50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 27-29 and 35-49 of copending Application No. 11/587758. Although the conflicting claims are not

identical, they are not patentably distinct from each other because all of the limitations of the instant application are claimed or obvious over 11/587758.

5. All of the limitations of the instant application are claimed by 11/587758 except the following.

a) That the wavelength of the laser is from 100 to 3000 nm (applicant's claim 27). However, 11/587758 claims a range of 100 to 1000000 nm. The wavelength used would depend on the material and the degree of melting required and would be obvious to optimize. Such optimization could lead to the claimed range.

b) controlling the temperature of the manufacturing chamber (applicant's claim 28) The processing temperature would also directly effect the formed product and thus also be obvious to optimize. Such optimization would include controlling the temperature of the manufacturing chamber.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 27-34, 36-40, 42, 44, 46, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podszun (CA 2371181) in view of Neev (USP 6482199).

8. Regarding claim 27, Podszun teaches a process for producing a three-dimensional object ("three-dimensional models", page 2 line 4) by providing a layer of a

pulverulent substrate (“a poured bed of fine particulate plastics powder”, page 2 lines 8-9) and use of lasers (“with the aid of laser beams”, page 2 line 5), characterized in that an absorber (According to the invention, the amount of IR absorber ranges form 0.01 to 10 % by weight… with respect to the plastics powder, page 7 lines 18-19) in a suspension or a liquid absorber is used(“In this process, the plastics particles are dispersed in a liquid phase… A solution of the IR dye [absorber] is added to the dispersion”, page 8 lines 2-7), and selective melting of regions of the powder layer takes place by means of introduction of electromagnetic energy via a laser (“the laser beam impinges… and in so doing fuses or sinters the material”, page 3 lines 6-7; This type of fusing would involve partially melting the individual particles to join their contacting surfaces) whose wavelength is from 100 to 3000 (“500 to 1500 nm”, column 2 line 6).

9. Podszun further teaches the method wherein “the absorber-containing liquid is applied to selected regions of the layer composed of pulverulent substrate by way of an apparatus (3) movable in the x, y plane.” in paragraph [0088], but does not specifically disclose that the absorber is selectively applied via an inkjet process to the regions to be sintered.

10. In the analogous art of three-dimensional article manipulation, Neev teaches a method wherein an absorber is selectively applied via an inkjet process to the regions to be affected by the laser (“To this end, it is contemplated-by the practice of the present invention to construct an absorbing agent deposition device which will very accurately and synchronously to the pulse laser operation, eject an absorbing agent source onto the targeted area… The ejector can be, in principle, similar to an exemplary ink jet

injection technology available from the commercial ink jet printer industry.", column 42 lines 25-42).

11. It would have been obvious to a person having ordinary skill in the art at the time of invention to modify the method of Podszun by selectively applying the absorber via an inkjet process as taught by Neev for the benefit of precisely controlling the deposition of the absorber.

12. It should be pointed out that Neev also teaches use of the electromagnetic radiation to more completely melt the region of interest ("The pulse source is operated and the beam parameter is manipulated so that the deposited volumetric power density within the targeted material is greater than the threshold power density for material modification… Such material modification preferably includes one or more of the of the following alterations: Chemical and physical changes, changes to visco elastic properties, changes to optical or thermal properties, chemical and physical breakdown disintegration, ablation, melting, or vaporization.", column 9 line 63 to column 10 line 15).

13. Regarding claim 28, Podszun and Neev remain as applied to claim 27. Podszun and Neev have been shown to teach a method of forming three-dimensional articles comprising the steps of a) providing a layer of a pulverulent substrate, c) selective application of an absorber in a suspension or of a liquid absorber via an inkjet process to the regions to be sintered, e) selective melting of regions of the powder layer by means of introduction of electromagnetic energy via a laser of wavelength from 100 to 3000 nm.

14. Podszun further teaches the method comprising b) controlling the temperature of the manufacturing chamber ("This solution was heated over one hour to 70 C", page 11 line 16; the container for the solution is a manufacturing chamber); d) application of other specific liquids or suspensions with certain properties (page 4 lines 24-28 describe the application of wax or "slurried ceramic material" as a coating.)

15. Regarding claim 29, Podszun and Neev remain as applied to claim 28. Podszun further teaches the method wherein ("The further layers which are required in order to finish the component are produced by repeating the procedure", page 3 lines 15-16. It should be pointed out that the selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results as described in MPEP 2144.04 [In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946)])

16. Regarding claim 30, Podszun and Neev remain as applied to claim 27. Podszun further teaches the method wherein the pulverulent substrate used has a median grain size of from 5 to 100 microns. ("2 to 200 microns, preferably 5 to 100 microns", page 3 lines 29-30. Because of the overlap of ranges, a prima facie case of obviousness exists over applicant's claimed range of 10 to 150 microns, (See MPEP 2144.05))

17. Regarding claim 31, Podszun and Neev remain as applied to claim 27. Podsun further teaches the method wherein use is made of a laser of wavelength from 800 to 1070 nm. ("a Nd-YAG laser with a wavelength of **1064** nm… is used", claim 3)

18. Regarding claim 32, Podszun and Neev remain as applied to claim 27. Podszun and Neev teach a method of forming a three-dimensional article comprising the use of a laser and application of an absorber to selective regions of a layer but have not been

shown to teach the method wherein use is made of a laser of wavelength from 1900 to 2100 nm.

19. Neev further teaches that the preferred wavelength is in the range of 200-2500 nm, in column 4 lines 25-26 and that "material removal remains a wavelength and beam energy dependent process", column 3 line 67-column 4 line 1, making wavelength a result effective variable.

20. Wavelength, being a result-effective variable, would be obvious to optimize as described in MPEP 2144.05. Such optimization in the specified range of 200 to 2500 nm could lead to selection of a wavelength of between 1900 and 2100 nm depending on the material to be patterned.

21. Regarding claim 33, Podszun and Neev remain as applied to claim 27. Podsun further teaches the method wherein use is made of an Nd:YAG laser. ("Nd-YAG lasers", page 8 lines 16-17)

22. Regarding claim 34, Podszun and Neev remain as applied to claim 34. Podsun further teaches the method wherein use is made of a diode laser. ("a semiconductor diode laser… is used", claim 3)

23. Regarding claim 36, Podszun and Neev remain as applied to claim 27. Podsun further teaches the method wherein the absorber comprises colorants. ("In principle, all compounds which absorb light [at a preferred wavelength] are suitable IR absorbers. Both IR pigments and IR dyes can be used independently of each other", page 6 lines 20-22)

24. Regarding claim 37, Podszun and Neev remain as applied to claim 36. Podsun further teaches the method wherein the absorber comprises pigments. ("In principle, all compounds which absorb light [at a preferred wavelength] are suitable IR absorbers. Both IR pigments and IR dyes can be used independently of each other", page 6 lines 20-22, see also claim 9)

25. Regarding claim 38, Podszun and Neev remain as applied to claim 36. Podsun further teaches the method wherein the absorber comprises dyes. ("In principle, all compounds which absorb light [at a preferred wavelength] are suitable IR absorbers. Both IR pigments and IR dyes can be used independently of each other", page 6 lines 20-22, see also claim 9)

26. Regarding claim 39, Podszun and Neev remain as applied to claim 27. Podsun further teaches the method wherein the absorber comprises carbon black, CHP, animal charcoal, graphite, carbon fibers, chalk, or interference pigments. ("Carbon black… is preferably used as an IR pigment", page 6 lines 24-25)

27. Regarding claim 40, Podszun and Neev remain as applied to claim 27. Podsun further teaches the method wherein the absorber comprises other components alongside carbon black, CHP, animal charcoal, graphite, carbon fibers, chalk, or interference pigments. (page 8 lines 1-13 describe an absorber which contains components other than the dye, such as water and a solvent. See also, a "carbon black dispersion" comprising various components other than carbon black in page 9 lines 29-31)

28. Regarding claim 42, Podszun and Neev remain as applied to claim 36. Podsun further teaches the method wherein the absorber also comprises distilled water, or alcohol, or solvent. (page 8 lines 1-13 describe an absorber which contains components such as water and a solvent.)

29. Regarding claim 44, Podszun and Neev remain as applied to claim 27. Podsun further teaches the method wherein the pulverulent substrate used comprises polymers. (page 3 lines 20-26 lists some polymers which are suitable for the invention)

30. Regarding claim 46, Podszun and Neev remain as applied to claim 44. Podsun further teaches the method wherein the polymer is a homo- or copolymer preferably selected from polyester, polyvinyl chloride, polyacetal, polypropylene, polyethylene, polystyrene, polycarbonate, polybutylene terephthalate, polyethylene terephthalate, polysulfone, polyarylene ether, polyurethane, thermoplastic elastomers, polylactides, polyoxyalkylenes, poly(Nmethylmethacrylimides) (PMMI), polymethyl methacrylate (PMMA), ionomer, polyamide, copolyester, copolyamides, silicone polymers, terpolymers, acrylonitrilebutadiene-styrene copolymers (ABS), and mixtures thereof. ("fusable pulyurethanes", page 3 line 23)

31. Regarding claim 50, Podszun and Neev remain as applied to claim 44. Podsun further teaches the method wherein use is made of a pulverulent substrate which comprises inorganic or organic pigments ("the plastics powder… [used to form the substrate] contains and IR absorber", page 2 lines 10-11; The method wherein the IR absorber comprises pigments, which would be either organic or inorganic, is described in page 6 lines 20- page 7 line 2).

32. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Podszun (CA 2371181) in view of Neev (USP 6482199) as applied to claim 27 above, and further in view of Kar (US 2001/0002287).

33. Regarding claim 35, Podszun and Neev remain as applied to claim 27. Podszun and Neev teach a method of forming a three-dimensional article comprising the use of a laser and application of an absorber to selective regions of a layer, but have not been shown to teach the method wherein use is made of a laser with unfocused, linear or spread beam.

34. In the analogous art of three-dimensional structure formation, Kar teaches a method wherein a spread laser beam is used for the benefit of more precisely controlling the melting and re-solidification of the layer (see paragraph [0027]).

35. It would have been obvious to a person having ordinary skill in the art at the time of invention to modify the method of Podszun and Neev by using a spread beam to achieve greater control over the melting and re-solidification process as taught by Kar.

36. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Podszun (CA 2371181) in view of Neev (USP 6482199) as applied to claim 27 above, and further in view of Melisaris (USP 6413697) and further in view of Kawasaki (USP 4317766).

37. Regarding claim 41, Podszun and Neev remain as applied to claim 27. Podszun and Neev teach a method of forming a three-dimensional article comprising the use of a laser and application of an absorber to selective regions of a layer, but do not appear to teach the method wherein a flame retardant is used.

38. In the analogous art of layered three-dimensional article manufacture, Melisaris teaches a method wherein flame retardants (column 24 line 32) are added to the material which is shaped. Flame retardants may not only be useful in the intended use of the formed article, but may also be beneficial in the prevention of accidents when using high energy lasers during the article formation.

39. It would have been obvious to a person having ordinary skill in the art at the time of invention to modify the method of Podszun and Neev by adding flame retardant material to the composition as taught by Melisaris for the benefit of prevention of flameup. Furthermore, such flame retardants could easily be added by incorporating the flame retardants into the absorber.

40. Melisaris does not disclose the make-up of the flame retardant and more specifically, does not appear to teach the method wherein the flame retardant is based on phosphorus or melamine cyanurate.

41. However, melamine cyanurate is a commonly used flame retardant in polymers (for example see abstract of Kawasaki).

42. A person having ordinary skill in the art at the time of invention would understand that simple substitution of the melamine cyanurate based flame retardant of Kawasaki for the generic flame retardant of Melisaris would lead only to the predictable result of a flame retardant absorber; therefore, a prima facie case of obviousness for said substitution exists as described in MPEP 2141.

43. Claims 43, 48, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podszun (CA 2371181) in view of Neev (USP 6482199) as applied to claim 36 above, and further in view of Bredt (US 2001/0050031).

44. Regarding claim 43, Podszun and Neev remain as applied to claim 36. Podszun and Neev teach a method of forming a three-dimensional article comprising the use of a laser and application of an absorber to selective regions of a layer, but do not appear to teach the method characterized in that the absorber also comprises a surfactant and/or wetting agent and/or biocide and/or moisture retainer.

45. In the analogous art of three-dimensional article formation, Bredt teaches a method wherein wetting agents are added to control the spreading of the printed material. ("Wetting agents are substances that control the surface tension of a liquid. These can be used to modify the spreading of the liquid adhesive on the surfaces of the printhead mechanism.", paragraph [0080])

46. It would have been obvious to a person having ordinary skill in the art at the time of invention to modify the method of Podszun and Neev by using a wetting agent as taught by Bredt for the benefit of controlling the spreading of the adhesive material on the applicator.

47. Regarding claims 48 and 49, Podszun and Neev remain as applied to claim 44. Podszun and Neev teach a method of forming a three-dimensional article comprising the use of a laser and application of an absorber to selective regions of a layer, but do not appear to teach the method characterized in that use is made of a pulverulent substrate which comprises inorganic fillers comprising glass beads.

48. In analogous art, Bredt teaches a method characterized in that use is made of a pulverulent substrate which comprises inorganic fillers comprising glass beads. ("the filler can be a combination of plaster (0-20%), limestone (calcium carbonate) (40-95%) and glass beads (0-80%). Generally the filler materials are selected on the basis of their ability to bond with the adhesive components, combined with the spreading characteristics of the dry powder.", paragraph [0052])

49. It would have been obvious to a person having ordinary skill in the art at the time of invention to modify the method of Podszun and Neev by using an inorganic filler comprised of glass beads for the benefit of manipulating the structural properties of the article formed.

50. Claim 45 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podszun (CA 2371181) in view of Neev (USP 6482199) as applied to claims 27 and 44 respectively, and further in view of Housholder (USP 4247508).

51. Regarding claim 45, Podszun and Neev remain as applied to claim 27. Podszun and Neev teach a method of forming a three-dimensional article comprising the use of a laser and application of an absorber to selective regions of a layer, but do not appear to teach the method characterized in that the pulverulent substrate used comprises sand, metal particles, or ceramic particles, which have been encapsulated by a polymeric material.

52. In the analogous art of three-dimensional article formation, Housholder teaches a method characterized in that the pulverulent substrate used comprises sand, metal particles, or ceramic particles, which have been encapsulated by a polymeric material.

("The fusible particles may be of a suitable plastic or plastic -coated sand", column 7 lines 47-49)

53. It would have been obvious to a person having ordinary skill in the art at the time of invention to modify the method of Podszun and Neev by using a pulverant substrate comprising plastic coated sand as taught by Housholder for the benefit of forming an article with increased strength due to the presence of sand.

54. Regarding claim 48, Podszun and Neev remain as applied to claim 44. Podszun and Neev teach a method of forming a three-dimensional article comprising the use of a laser and application of an absorber to selective regions of a layer, but do not appear to teach the method characterized in that use is made of a pulverulent substrate which comprises inorganic fillers.

55. In the analogous art of three-dimensional article formation, Housholder teaches a method use is made of a pulverulent substrate which comprises inorganic fillers. ("The fusible particles may be of a suitable plastic or plastic -coated sand [inorganic filler]", column 7 lines 47-49)

56. It would have been obvious to a person having ordinary skill in the art at the time of invention to modify the method of Podszun and Neev by using a pulverant substrate comprising plastic coated sand as taught by Housholder for the benefit of forming an article with increased strength due to the presence of sand.

57. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Podszun (CA 2371181) in view of Neev (USP 6482199) as applied to claim 36 above, and further in view of Melisaris2 (USP 6177232).

58. Regarding claim 47, Podszun and Neev remain as applied to claim 44. Podszun and Neev teach a method of forming a three-dimensional article comprising the use of a laser and application of an absorber to selective regions of a layer, but do not appear to teach the method characterized in that use is made of a pulverulent substrate which comprises from 0.05 to 5% by weight of a powder-flow aid.

59. Podszun further teaches the method wherein flow enhancing agents can be used to improve the flowability of the particulate substrate material (“Flow enhancing agents therefore usually have to be added to the plastics in order to improve the flowability”, page 4 lines 6-7) but teaches that the uses of flow enhancing agents should be minimized ("[when] flow enhancing agents are added, it has been observed that they cannot be incinerated without leaving a residue", page 4 lines 21-22) but does not give any indication as to the magnitude of a maximum concentration for the flow agents.

60. In the analogous art of three-dimensional article formation, Melisaris2 teaches the use of flow agents at a concentration of “most preferably up to 8%”, column 12 lines 25-31.

61. Because flow aids are a result effective variable as described by Podszun, the amount used would be obvious to optimize as described in MPEP 2144.05. The extremes of the range of optimization would be between 0 % on the low side and up to 8% as taught by Melisaris2 on the high side. Such optimization could lead to values in the claimed range of 0.05 to 5%.

Response to Arguments

62. Applicant's arguments filed 8/14/09 have been fully considered but they are not persuasive. Applicant argues that:

a. The claimed invention differes from Podszun and Neev with respect to the combination and sequence of steps. However, a specific ordering of the steps is not imposed by the claimed language. It is improper to read a specific order of steps into method claims where, as a matter of logic or grammar, the language of the method claims did not impose a specific order on the performance of the method steps, and the specification did not directly or implicitly require a particular order (see MPEP 2111.01). To further clarify, the specification does not disclose or require that step a) [providing a layer of pulverulent substrate] must be performed before step b [controlling the temperature of the manufacturing chamber].

b. In Neev, the absorber is not applied with inkjet technology and the substrate is not pulverulent. However, Neev does teach the application of an absorber with inkjet technology ("In the figure [6c] the ejector 342 draw the absorbing agent from a reservoir 340 and direct a drop of a predetermined volume into the desired interaction location 344. The ejector can be, in principle, similar to an exemplary ink jet injection technology available from the commercial ink jet printer industry.", column 42 lines 37-42) and the pulverulent limitation is met by Podszun ("a poured bed of fine particulate plastics powder", page 2 lines 8-9).

c. Podszun and Neev are not analogous art. Although the processes of Podszun and Neev are different, Podszun is directed to the manufacture of three-dimensional articles via the application of laser energy, while Neev discloses techniques for improving material removal and modification via laser energy on surfaces and in three dimensions; therefore, a skilled artisan would consider the teachings of Neev in order to more skillfully modify the material as is necessary in the method of Podszun.

Conclusion

63. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMIAH SMITH whose telephone number is 571-

270-7005. The examiner can normally be reached on Monday to Friday, 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on 571-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JRS

/Joseph S. Del Sole/
Supervisory Patent Examiner, Art Unit 1791